Work Order l Wednesday, Septemb	ID 74081 ber 21, 2011 10:49:50 A									Page 1
Item ID: D3	183-045	Ā	Accept				s	etup Star	t	
Item Name: Bea	ring Assembly							Sto)	
Required Date: 10/6	2/2011 Start Qty: 20.00 6/2011 Req'd Qty: 20.00			Cust Item II Customer:	D:					
Reference: Approvals: Pr	ocess Plan:	Date: 11-09-21	Tooling:	Da	ite:	_	R	tun Star	t	
•	C:	Date:	SPC (Y/N):		te:			Stoj		
Sequence ID/ Work Center ID	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr									
D3183	Rev C1							1		
	Hardinge CNC LATH	E SMALL	0.00			6	22	b		
Hardinge CNC Lathe Sma	Memo all Turn D31	83-9 Cap as per Folio FA388 🗆	0.00 Deburr	30				.,		
	QC2- Inspect parts off	machine FAI/FAIB	0.00			•	22			
QC Quality Control	Memo	7	109/3	0				•		
120	QC8- Inspect parts - s	econd check		- 11. 7	30		22	d		
QC Quality Control	Memo		0.00							

Dart Aerospace	Ltd
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W/O:			WO	RK ORDER CHANG	ES	· · · · · · · · · · · · · · · · · · ·		•
DATE	STEP PROCEDURE CHANGE By	Date Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector				
			**************************************				·	_
						·		
Part No	:	PAR #:	Fault Categ	ory:	_ NCR: Yes f	No DQA:	Date: _	
	Re	esolution:	Disposition	:	QA: N/C Clo	sed:	Date: _	
NCR:			WORK ORDE	R NON-CONFORM	ANCE (NCR))		
DATE	CTED	Description of NC						
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC Inspector
				. *				
								
							1	

Work Order ID 74081

Wednesday, September 21, 2011 10:49:50 A



Page 2

Item ID:

D3183-045

Accept

Setup Start



Revision ID:

Item Name:

Bearing Assembly

Start Date:

9/22/2011

Start Qty: 20.00

Required Date: 10/6/2011

Req'd Oty: 20.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Operation

Description

Date:

Tooling:

Date:

Date:

Start

Stop

Stop



Sequence ID/

Work Center ID

Date: _____

SPC (Y/N):

Set Up/

Tool ID

Tool # Plan Code

Reject Accept Qty Qty

Run

Reject Number

Insp. Stamp

130

Small Fab

Small Fab

Memo

0.00

Small Fab

Press D3183-5 Bearing into D3183-9 Cap as per Dwg D3183.

0.00

Run Hours

140

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

0.00

150

Packaging

Identify as per dwg & Stock Location: 236

0.00

Memo

Memo

0.00

Packaging

Dart Aerospace L	Ltd
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W/O:			WO	RK ORDER CHANG	SES		****		· · · · · · · · · · · · · · · · · · ·	•
DATE STEP	PRO	OCEDURE CHAN	IGE	Ву	1	Date	Qty	Approval Chief Eng /	Approval QC Inspector	
									Prod Mgr	20 maposts.
							:			
						+			<u></u>	
Part No	•	PAR #:	Fault Categ	jory:	_ NCR: Y	es No	DQA	٨:	Date: _	
		solution:								
NCR:		,	WORK ORDE	R NON-CONFORM	ANCE (N	CR)	-			
		Description of NC			tion B		Verific	ation	Approval	Approval
DATE	STEP	STEP Description of NC Section A	Initial Chief Eng	Action Description Chief Eng		n & ate	Section C		Chief Eng	QC Inspector
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									-	
		•								
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Work Order ID 74081

Wednesday, September 21, 2011 10:49:50 A



Page 3

Item ID:

D3183-045

Accept



Setup Start

Stop



Revision ID:

Start Date:

Item Name:

Required Date: 10/6/2011

Bearing Assembly

9/22/2011

Start Qty: 20.00

Req'd Qty: 20.00



Date:_____

Cust Item ID:

Customer:

Reference:

A	nn	ros	als	:

Process Plan:

QC:____

Date: _____

Tooling:

Date:

Date:

Run

Start

Stop



Sequence ID/

Operation **Work Center ID**

Description

QC21- Final Inspection - Work Order Release

Set Up/ Run Hours

0.00

SPC (Y/N):

Tool ID

Tool # Plan Code

Accept Qty

Reject Qty

Reject Insp. Number

Stamp

160

Memo

0.00

Quality Control

W/O:		and the second of the second o	W	ORK ORDER CHANG	ES		<i>:</i>	•
DATE	STEP	PRO	OCEDURE CHA	ANGE	Ву	Date Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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	,						٠	
Part No	:	PAR #:	Fault Cate	egory:	_ NCR: Yes N	lo DQA:	Date: _	
	Re	esolution:	Disposition	on:	_ QA: N/C Clo	sed:	Date: _	
NCR:	-	,	WORK ORE	ER NON-CONFORMA	NCE (NCR)			:
DATE	CTED	Description of NC		Corrective Action Secti		Verification	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	QC Inspector
								·
								,

Picklist Print

Wednesday, September 21, 2011 10:49:47 AM

Work Order ID: 74081

D3183-045

Parent Item Name: Bearing Assembly



Start Date: 9/22/2011

Required Date: 10/6/2011

Start Qty: 20.00

Required Qty: 20.00

Comments:

Parent Item:

IPP A□04.02.18□New issue□KJ/DS□

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3183-5 Bearing		Manufactured	No			110	Each	27.0000		20	4/09	/30	
•				Location		Loc	<u>Oty</u>	Loc Code					
	•			ST236			27		_		_		
					67529		l		_	-22-	_		
					73797		26		_	20	_		
MDELRINR1.000		Purchased	No			130	f	35.6090	0.0333	0.701053	10	VIC)
				Location		Loc	<u>Qty</u>	Loc Code					
,				MAT055		35	5.609				_		
					117985 118257).407 9.202		_	71	L		
					118392		16		_		_		

								,	
W/O:			WO	RK ORDER CHANGE	S				•
DATE	STEP	PRO	OCEDURE CHAI	NGE	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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Part No		PAR #:							
	Re	esolution:						Date: _	<u> </u>
NCR:		`	WORK ORDE	ER NON-CONFORMAN	NCE (NCR	1)			
DATE	CTED	Description of NC		Corrective Action Section		Verific	ation	Approval	Approval
DATE	STEP	. Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section			QC Inspector
								·	

DART AEROSPACE LTD	Work Order:	74081
Description: Cap	Part Number:	D3183-9
Inspection Dwg: D3183 Rev: C1		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

X First Artic	le 🗌	Prototype
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Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
Ø0.830	+/-0.005	0.830		•	SLA	
Ø0.720	+/-0.002	0,719		-	1	
Ø0.747	+/-0.001	0.747				
R0.010	+/-0.010	12.000				
R0.031	+/-0.010	R,031		_		
0.199	+/-0.001	1192		- 1		
0.276	+/-0.010	. 2775				
0.039	+/-0.010	-040				
		,	1,			
					\	
				•		

Measured by:	A	Audited by:	Prototype Approval:	N/A
Date:	11930	Date: 11 . 2 . 30	Date:	N/A

Rev	Date	Change	Revised by	Approved
Α	04.04.20	New Issue (P/O D3183-045)	KJ/RF	1
В	06.03.09	Dimension Ø0.830 was Ø0.850	KJ/JLM	

Dart Aerospace Ltd WORK ORDER CHANGES W/O: Approval Chief Eng / **Approval STEP** DATE **PROCEDURE CHANGE** Date By Qty QC Inspector Prod Mgr ر انج PAR #: ____ Fault Category: ____ NCR: Yes No DQA: ___ Date: ____ Part No: _ Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)										
		Description of NC		Corrective Action	Section B	Verification	Approval Chief Eng	Approval QC Inspector				
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	on Sign Dat	& Section C						
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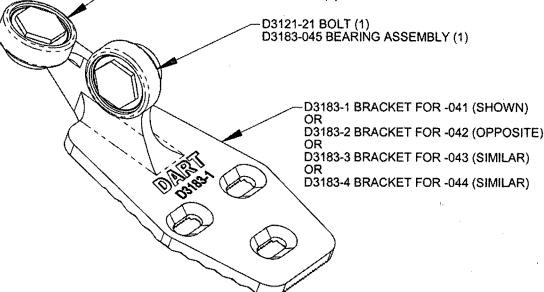
DESIGN	DRAWN BY	DART AEROSPACE HAWKESBURY, ONTARIO, CA	
CHECKED	APPROVED -	DRAWING NO.	REV. C
DATE	12 17	DDACKET ASSEMBLY	SCALE

DEO ATTACHED

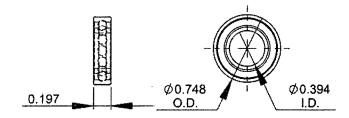
-	שואט		1111LC	SCAL
		04.02.17	BRACKET ASSEMBLY	1:
	Α.	03.01.24	NEW ISSUE	
	В	03.06.17	REMOVE BEARING; 1.012 WS 0.882	
	С	,04.02.17	ADD -045/-9; 0.182 WAS 0.431	***************************************
	CI	-47 04.11.09	0.830 WAS 0.850	

D3121-21 BOLT (1)

D3183-045 BEARING ASSEMBLY (1)

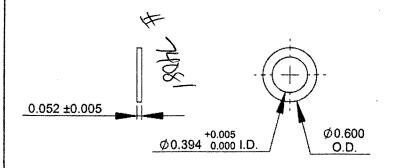


D3183-041 BRACKET ASSEMBLY (SHOWN)
D3183-042 BRACKET ASSEMBLY (OPPOSITE)
D3183-043 BRACKET ASSEMBLY (SIMILAR)



D3183-5 BEARING: SPECIFICATION CONTROL DRAWING

- 1) SINGLE ROW, DEEP GROOVE, CONRAD TYPE, SHIELDED 2) POSSIBLE SUPPLIER: NSK P/N 6800ZZ
- 3) ALL DIMENSIONS ARE IN INCHES

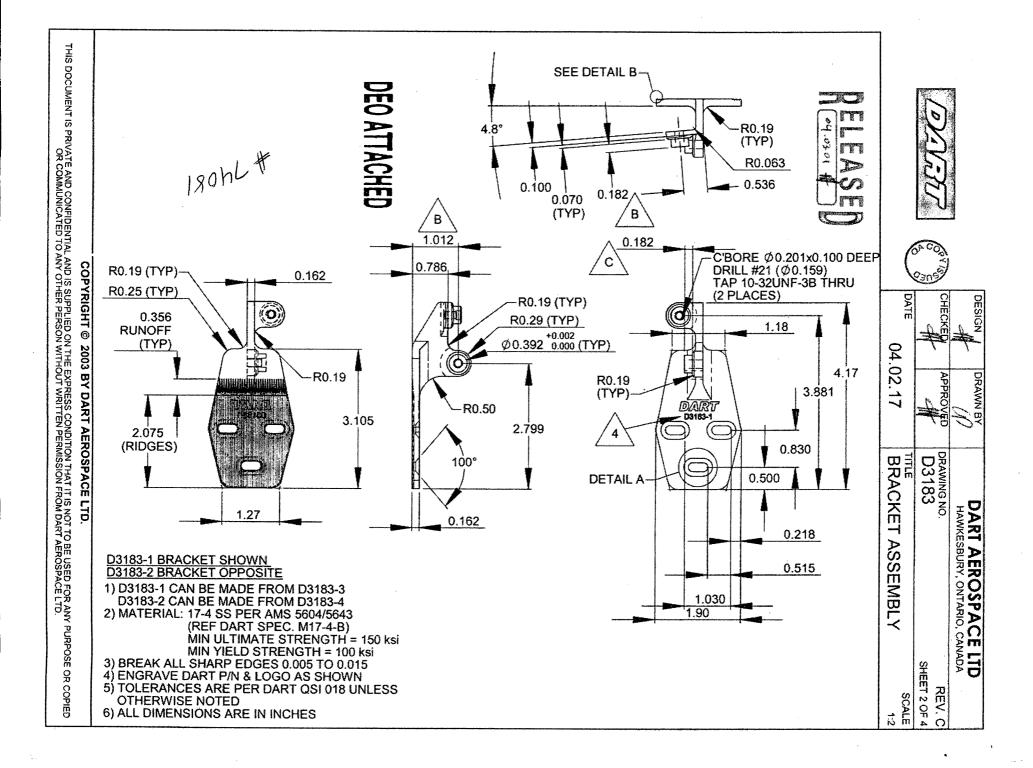


D3183-7 WASHER

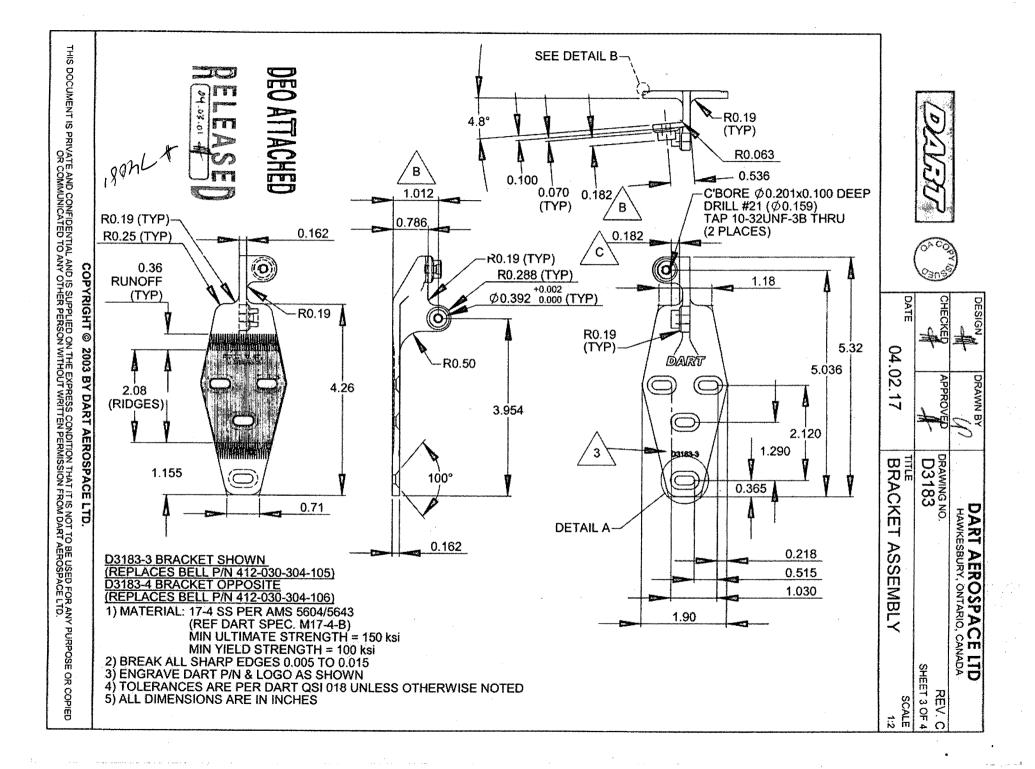
- 1) MATERIAL: AISI 303 ROUND BAR (M303R) **ANNEALED**
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES

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W/O:			WORK ORDER CHANGES									
DATE	STEP	PRO	PROCEDURE CHANGE					Approval Chief Eng / Prod Mgr	Approval QC Inspector			
Part No	:	PAR #:	Fault Categ	jory:	NCR: Yes	No DQ	A:	Date: _				
	R	esolution:	Disposition	1:	QA: N/C Cld	sed:		Date: _				
NCR:		·	WORK ORDE	R NON-CONFORMA	NCE (NCR)						
DATE	STED	Description of NC		Corrective Action Section		Verific	cation	Approval	Approval			
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W/O:			WO	RK ORDER CHANGI	ES				
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DATE	STEP	Description of NC	Corrective Action		on B		cation	Approval	Approval
- DAIL	J.E.	Section A	Initial Chief Eng	Action Description Chief Eng	Sign Dat		ion C	Chief Eng	QC Inspector
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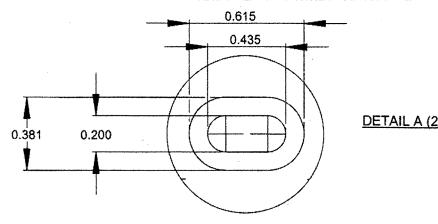


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DATE	STEP	PROC	EDURE CH	ANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
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4										
Part No	•	PAR #:	_ Fault Cat	egory:	NCR	: Yes N	o DQA	۱:	Date:	
	R	esolution:	Disposition:						Date: _	
NCR:		W	ORK ORI	DER NON-CONFORM	ANCE	(NCR)				
DATE	STEP	Description of NC	Corrective Action Secti			0! 0	Verific		Approval	Approval
		Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Section	on C	Chief Eng	QC Inspector
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DESIGN	DRAWN BY	DART AEROSPACE HAWKESBURY, ONTARIO	
CHECKED	APPROVED	DRAWING NO. D3183	REV. C
DATE 04.	02.17	BRACKET ASSEMBLY	SCALE

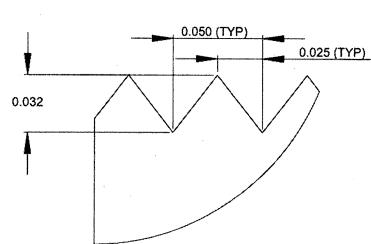


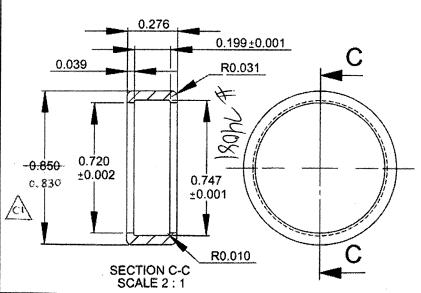
DETAIL A (2:1)



DEO ATTACHED

DETAIL B (20:1)





D3183-9 CAP

- 1) MATERIAL: DELRIN ROD, Ø1.00
- (REF DART SPEC. M-DELRIN-R1.00)
 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES

D3183-045 BEARING ASSEMBLY

1) ASSEMBLE D3183-5 BEARING AND D3183-9 CAP

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W/O:			WO	RK ORDER CHANGE	ES				
DATE	STEP	PRC	PROCEDURE CHANGE			Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No		PAR #:							
	R	esolution:	Disposition	1:	QA: N/C C	losed:		Date: _	
NCR:		1	WORK ORDE	ER NON-CONFORMA	NCE (NCI	?)			
DATE	STEP	Description of NC Section A	Initial Chief Eng	Corrective Action Section Action Description Chief Eng	on B Sign	& Sect	cation ion C	Approval Chief Eng	Approval QC Inspector
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DRAWING	NO. T	ITLE		, REV.C1	DART	AERO	SPACE LTD	D.E.O. NO.		SHEET NO.	SCALE
D3183	_ [8	RACKET ASS	SEMBLY	1			NG ORDER	D3183-C1-	-1 0	SHEET 1 OF 1	итѕ
DRAWN	P	CH	ECKED _	基	MFG. APP	R. A		APPROVED	W	DE APPR.	
DATE	10.05.14	4 DA	TE 10.0	6.30	DATE	10.0	6.30	DATE 10	100/30	DATE 10/06/3	30

D3183-5 BEARING

ADD POSSIBLE SUPPLIER: KML P/N 6800-ZZ

BASIC LOAD RATING REQUIREMENT:

Cr = 1720 N (386 lb) MIN [DYNAMIC]

Cor = 840 N (188 lb) MIN [STATIC]

REF PAR 10-012

180hL F



W/O:			WORK ORDER CHANGES									
DATE	STEP	PRO	PROCEDURE CHANGE					Approval Chief Eng / Prod Mgr	Approval QC Inspector			
						,						
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	Re	esolution:	Disposition		_ QA: N/C Clo	osed:		Date: _				
NCR:		,	WORK ORDE	R NON-CONFORMA	NCE (NCR)						
DATE	0750	Description of NC		Corrective Action Section		Verific	ation	Approval Chief Eng	Approval			
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date				QC Inspector			
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